GENERAL TERMS / CONCEPTS	
QUESTIONS	HCP assessing for presence of ballottement. To make determination, the HCP should take which action? ● Initiate gentle upward tap on cervix Characteristics of amniotic fluid include: ● Allow fetal movement, surround, cushion & protect fetus, maintain body temp, can be used to evaluate fetal kidney function A couple come to a family planning clinic & ask about sterilization. Which question by the nurse is most appropriate ● Do you plan to have any other children?
3 trimesters	0-12, 12-24, 24-40
Naegele's Rule	Last day of menstrual period - 3 months + 7 days = next year due date
quickening	Maternal perception of first fetal movement Usually 16-20 weeks
Goodell's Sign	Softening of cervix. Probable sign of preggo
Chadwick's sign	Violet coloration of cervix ~ 4 weeks. Probable sign of preggo
ballottement	Rebounding of fetus against examiners fingers on palpation (intravaginal exam)
Oligohydramnios	<500mL's of amniotic fluid
polyhydramnios	>2000 mL's of amniotic fluid
Functions of amniotic fluid	Prevent mechanical injury, control temperature, permit symmetric growth, Provides fluid for analysis (fetal health & maturity)
8 weeks	Every organ system is present. Goodells sign is present here. Can have increased leukorrhea discharge. Chadwicks can be seen around this period.
10-12 weeks	Heartbeat detected by doppler. By 12 weeks external genitalia can be visually determined
16-20 weeks	Fetal movement (quickening)
28 weeks	Lungs developed, neonate able to breathe after this point
36 weeks	L/S > 2:1 (lecithin-sphingomyelin) is indicative of fetal lung maturity.
Wharton's Jelly	Surrounds umbilical cord, prevents compression

Fetal Circulation	2 arteries - deoxygenated blood & waste from fetus 1 vein - oxygenated blood & nutrients to fetus FHR 160-170 in first trimester, 110-160 near or @ term ● Ductus Arteriosus connects pulmonary artery to aorta ● Foramen Ovale gap between R & L atria ● Ductus Venosus joins hepatic vein
Family Planning	Birth control is the woman's preference. Religious practices may affect choice
Pica	Eating/craving non-food substances: dirt, clay, freezer frost Can → Fe deficiency anemia
Breast feeding	Requires additional 500 calories / day
Pre-eclampsia	HTN, facial swelling, proteinuria'
Mother - Physiologic Changes	
Cardiovascular	Decreased BP from decrease in SVR ^Blood volume by 40-50% → ^HR of 15-20 bpm ^CO by 30-50% can → ^heart size ● Hemodilution by increased plasma volume can result in physiological anemia and a decreased H&H (Fe-deficiency anemia when Hgb <11 & hct <33% ^venous pressure and decreased blood flow to extremities can present as edema in lower extremities with varicosities & hemorrhoids
Supine hypotension / vena cava syndrome	Weight of uterus compresses vena cava reducing preload. Faintness, lightheadedness, dizzy Encourage mother to rest on left side
Respiratory	^ o2 consumption by ~20% --- present with dyspnea Estrogen, progesterone & prostaglandin cause vascular engorgement & smooth muscle relaxation ● Sinus congestion & epistaxis Upward displacement of diaphragm by uterus → thoracic breathing
Renal	^progesterone levels → smooth muscle dilation ● **^ risk of UTI,** (ureters elongate w/ ↓ motility. ↓bladder tone. ^GFR can → glucosuria & proteinuria
GI	^hCG can alter carb metabolism → N/V in early pregnancy ^progesterone lvls → slowing digestive process ● Constipation, hemorrhoids from straining, delayed gastric emptying ^risk of gallstones (can present as pruritus from retention of bile salts) **Human Placental Lactogen** from placenta → insulin resistance and

	development of gestational DM
Endocrine	^ progesterone: maintains prego w/ relaxation of smooth muscle (uterus) ^estrogen: ↓GI motility, ^uterus/breast dev & vascularity, ^prolactin: facilitates lactation ^oxytocin: stim uterine contractions & milk let-down HPL: ^breast dev, alters carb,fat,protein metabolism → fetal growth ^hCG: maintains corpus luteum until placenta is fully functional ^BMR from fetal activity → depletion of maternal glucose stores, ^insulin prod → insulin resistance
Ovulation	Stimulated by luteinizing hormone (LH) Increase in body temperature and progesterone until menses (unless pregnant)
Breast ∆'s	^estrogen & progesterone → tenderness, fullness & tingling. ^prolactin (ant. pituitary) → prod. Of colostrum by 16th week of preg
Cultural Considerations	Patterns of decision makings, religious preferences, communication styles expectations of healthcare system.
Bottle feeding	Wear well supportive bra, avoid warm showers for 72 hrs, Ice packs can relieve discomfort, take pain medication as prescribed
ASSESSMENT	
QUESTIONS	The nurse is assessing a client of 28weeks gestation, where should the fundus be palpated? ● ~28cm above the pubis symphysis The nurse recognizes what as probably signs of preggo ● Chadwick, goodell, ballottement, braxton hicks, uterine enlargement Client preg with twins. Hx of 5yo delivered @ 38 weeks and no abortions or fetal demises. What is her GTPAL? ● G2,T1,P1,A0,L1 What is the average expected weight gain during pregnancy? ● 25-35lb
G-ravida	Number of pregnancies
T-erm	Number of births >37 weeks
P-reterm	Number of births <37 weeks
A-bortions	Abortions or miscarriages before 20 weeks
L-iving	Number of current living children
GTPAL	Client preg with twins. Hx of 5yo delivered @ 38 weeks and no abortions

	or fetal demises. G2,T1,P1,A0,L1
Presumptive signs of preggo	Amenorrhea, N/V, ^breast size / fullness, urinary frequency, **<u>quickening</u>**
Probable signs of preggo	Uterine enlargement Hegar's rule: softening of lower uterine segment Goodell's sign Chadwick's sign Ballottement: rebounding of fetus against palpation Braxton hicks contractions (irregular & painless) Positive off the shelf preggo test (detects human chorionic gonadotropin (hCG) which is the earliest biochemical marker for pregnancy Striae gravidarum (stretch marks)
Positive Signs of Preggo	Fetal heart rate detected by electronic device - Doppler = 10-12 weeks - Fetoscope = 20 weeks Active fetal movements palpated by examiner Outline of fetus on radiography or ultrasonography
Fundal Height	During 2nd & 3rd trimester, height in cm ~ fetal age in weeks ~20 weeks should be at umbilicus ~36 weeks @ xiphoid process
Adolescent pregnancy	Risk factors: ∆ing sexual behaviors, poverty, lack of knowledge Major concerns: poor nutritional status, emotional &* behavioral difficulties, ^risk of stillbirth, **<u>LOW-BIRTH-WEIGHT</u>** infants, **<u>Prolonged Labor</u>** ***** women of childbearing age should take folic acid supplements to prevent neural tube deficits & orofacial clefts in fetus ******
Geriatric Pregnancy	> 35 years old = ^ risk of adverse perinatal outcomes and NEED MONITORING
STD's TORCH	**T**oxoplasmosis: from cat feces, raw beef. → dev. Abnormalities **O**ther: gonorrhea, syphilis, varicella, Hep B, HIV ● HIV: transmitted through blood & bodily fluid including breast milk. ○ Perinatal admin of zidovudine is recommended to decrease transmission to fetus. **R**ubella: viral. Causes heart disese, growth retardation, cataracts **C**ytomegalovirus: virus. → microcephaly, blindness, retardation **H**SV: Vaginal birth requires adherence to antiviral medication, though cesarean birth is recommended especially if lesions are visible.

Alcohol in preggo	- leading preventable cause of mental retardation (fetal alcohol syndrome) low birth weight, small head circumference, undeveloped cheekbones, poor ability to suck/feed,
Tobacco in preggo	low birth weight, higher incidence of birth defects and stillbirth
Blood Type	Rh typing & Rh (-) means mother will need to receive RhoGAM @ 28 weeks to prevent developing permanent antibodies for future pregnancies and within 72 hrs after birth
Alpha-fetoprotein screening	Can detect spina bifida & down syndrome. False positives are common. Drawn between 16-18 weeks gestation, if abnormal and second test is drawn.
Amniocentesis	Best between 15-20 weeks. Tests for genetic disorders, metabolic defects & fetal lung maturity ● Risks: hemorrhage, infection, abruptio placentae, premature rupture of membranes ● <20 weeks, client should have full bladder to support uterus ● Obtain fetal HR q15 min ● Position client supine during procedure, & left side to recover
BIRTH	
Fetal Position	Facing: R or L of mother's pelvis Presenting part: Occiput, Mentum, Scapula Location: Anterior, Posterior, Transverse ● ROA is ideal for vaginal birth.
Fetal Lie	How fetus is position in mother Longitudinal = vertex presentation (top of head) Longitudinal = Breech (butt / leg) Transverse = scapula
4 P's of Labor	Powers Passageway - vagina Passenger - fetus, membranes, placenta Psyche - mothers emotional structure
Powers	Primary forces: uterine contractions Secondary forces: abdominal & pelvic muscles to push baby out
Dilation	Expressed in centimeters. Full dilation = 10cm & end of 1st stage of labor
Effacement	Shortening & thinning of cervix. 0-100%
Stages of labor	1 = beginning of labor to 10cm dilated 2 = 10cm to delivery 3 = birth to complete delivery 4 = 1-4hrs after birth (fundus @ umbilicus, baby skin-skin, breast feeding)

True labor	Regular contractions that gradually come closer together Contractions increase in duration, frequency & intensity Discomfort begins in back and radiates to abd Intensity increases with walking Cervical dilation and effacement are progressive Contraction does not decrease w/ rest or warm bath
Cardinal movement of labor	Engage → descent → flexion & internal rotation → extension (once head is out of vaginga → external rotation → expulsion (rest of baby)
Lochia	Rubra = delivery to day 3 Serosa = brownish/pink, days 4-10 Alba = white, days 11-14 Weigh peripad to determine amount. Excessive ≥1pad in 15min
FHR Monitoring	If brady/tachy occur, Δ mother's position, administer o2, assess mothers vitals. **Accelerations** = GOOD. 15bpm for 15 sec is normal **Early Decel** = normal with contractions (FHR still >100) **Late decel** = begin after contraction & indicate decrease blood flow to fetus. **Variable Decel** = notify HCP immediately! O2 to mom, reposition, DC oxytocin. Amnioinfusion may be ordered = warm saline
Problems with Labor Basically monitor FHR for distress (late decels), Mother for shock (lower HOB & left lateral position) Keys: circulation to fetus, euvolemic mother, o2 for both!, infection to mother/fetus,	
Premature Rupture of Membranes	Before term, delivery will be delayed = ^ risk of infection **Assess**: color, amount, odor, vital signs (^temp = infection) Fetal Monitoring: tachycardia may = infection **Interventions:** avoid vacinal exams, monitor maternal/fetal status, admin ABX as prescribed
Prolapsed Umbilical cord	**Assess**: vagina, cor is visible/palpable?, Fetal HR irreg & slow? **Interventions:** elevate presenting part to relieve pressure on cord, place mother in lateral knee to chest position, monitor FRH & hypoxia, administer high flow o2, prepare to start IV fluids & immediate birth.
Abruptio Placentae	Dark red vaginal bleeding. Uterine pain/tenderness/rigidity. Signs of fetal distress. **Interventions:** maintain bedrest, IV fluids / blood, lateral position w/ HOB flat if shock occurs.
Placenta Previa	Bright red, painless, vaginal bleeding. Uterus soft, nontender, & relaxed. **Interventions:** avoid digital stimulation. Maintain bed rest. Tx for shock.

Fetal Distress	FHR <110 or >160. Meconium-stained amniotic fluid. Fetal hyperactivity. Late Decel **Intervention:**lateral position, high flow o2, DC oxytocin if infusing. **Prepare for emergency C-Section
MEDS for OB	
Tocolytics	Place mother on side to ^placental perfusion & give o2 Monitor maternal vitals, fetal status & labor status ● Indomethacin (prostaglandin inhibitor) ● Mag sulfate ● Nifedipine (CCB) ● Terbutaline (B-agonist)
Mag sulfate	CNS depressant → smooth muscle dilation Monitor for toxicity (depress reflexes, weakness. Notify HCP if RR <12. ● **Antidote**: Ca Gluconate
Surfactant Agents	Betamethasone / Dexamethasone Accelerate fetal lung maturity in preterm infant (28-32 weeks) ● Monitor mother for infection, WBC, & BGL
Prostaglandin	Misoprostol / Dinoprostone Vaginal inserts to ripen cervix & stimulate uterine contractions **SE**: cramping, N/V, flushing, hypotension ● Have client void before admin & stay supine for 30-60min
Uterine Stimulant	Oxytocin / Pitocin → stim smooth muscle of uterus Maternal Vitals & Fetal HR q15min, ● Hypertonic rxn → STOP PITOCIN, turn client on side, notify HCP
Postpartum Hemorrhage	Ergot Alkaloids (Methyler**gonovine**, Er**gonovine**) ● Monitor BP before, can → severe HTN (can produce vasospasm) Oxytocin Carboprost (prostaglandin F) ● Contraindicated in client w/ asthma
RhoGAM	anti-Rh given @ 28 weeks & within 72hrs of delivery to prevent isoimmunization in Rh (-) mothers
Phytonadione (Vit K)	For newborns, necessary cofactor for clotting factors (**immature livers**). Can → hyperbilirubinemia